

Amendments to the Claims:

This listing of the claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A system for hybrid electronic/photonic switching of traffic in a node of a communications network, the system comprising:
 - a plurality of interfaces adapted to translate respective traffic streams between corresponding electronic and optical signals, the plurality interfaces comprising:
 - at least one working interface; and
 - at least one protection interface, a number of the protection-interfaces being selected-provisioned based on a probability of failure of a working interface;
 - an electronic cross-connect (EXC) adapted to selectively map an electronic signal from a selected first one of the interfaces to a selected second one of the plurality of interfaces; and
 - a photonic cross-connect (PXC) adapted to selectively couple respective optical signals between each selected interface and selected ones of a plurality of optical channels comprising at least one working optical channel and at least one protection optical channel of the communications network; and

wherein the traffic streams through the hybrid electronic/photonic switching system can be re-routed to bypass a failed interface without altering traffic flows within the communications network itself, as each of the plurality of interfaces can be selected independently of the at least one working optical channel and the at least one protection optical channel.
2. (cancelled)

3. (previously presented) A system as claimed in claim 1, wherein a number of working interfaces corresponds with a number of working channels of the communications network.
4. (original) A system as claimed in claim 3, wherein each working interface is adapted to translate between an electronic signal and a corresponding optical signal having a substantially fixed predetermined wavelength.
5. (original) A system as claimed in claim 4, wherein the predetermined wavelength is determined during provisioning of the interface in accordance with a design of the communications network.
6. (original) A system as claimed in claim 5, wherein the predetermined wavelength corresponds with a channel wavelength of at least one working channel of the network.
7. (original) A system as claimed in claim 4, wherein at least one working interface comprises a narrow-band laser adapted to generate an optical signal having the predetermined wavelength.
8. (original) A system as claimed in claim 4, wherein at least one working interface comprises a tunable laser adapted to generate an optical signal having the predetermined wavelength.
9. (cancelled)
10. (previously presented) A system as claimed in claim 1, wherein each protection interface is adapted to translate between an electronic signal and a corresponding optical signal having a selected wavelength.
11. (original) A system as claimed in claim 10, wherein the selected wavelength is dynamically selected from a set of channel wavelengths of the network.

12. (original) A system as claimed in claim 10, wherein each protection interface comprises either one or both of:
 - a wide-band optical detector adapted to detect an optical signal having a wavelength corresponding to any channel wavelength of the network; and
 - a laser adapted to generate an optical signal having the selected wavelength.
13. (original) A system as claimed in claim 12, wherein the laser is a narrow-band laser adapted to generate an optical signal having the selected wavelength.
14. (previously presented) A system as claimed in claim 12, wherein the laser is a tunable laser adapted to generate an optical signal having the predetermined wavelength.
15. (cancelled)
16. (previously presented) A system as claimed in claim 14, wherein the control system comprises:
 - a first detector adapted to detect a failure of a working interface;
 - a selector adapted to select a protection interface for translating the respective traffic stream of the failed working interface;
 - an EXC controller adapted to control the EXC to re-map the respective electronic signal of the traffic stream through the selected protection interface; and
 - a PXC controller adapted to control the PXC to couple the respective optical signal of the traffic stream between the selected protection interface and a respective optical channel through which the traffic stream is being conveyed.
17. (previously presented) A system as claimed in claim 16, wherein the control system further comprises a tuner adapted to tune the selected protection interface to the predetermined wavelength of the failed working interface.

18. (previously presented) A system as claimed in claim 14, wherein the control system comprises:

- a second detector adapted to detect a failure of a working channel of the communications network;
- a second selector adapted to select an alternate optical channel through which a traffic stream being conveyed by the failed channel can be carried; and
- a PXC controller adapted to control the PXC to couple the respective optical signal of the traffic stream between the selected interface and the selected alternate optical channel.